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CLINICAL SUPERVISION OF THE STUDENT TEACHER: AN APPLIED BEHAVIOR ANALYSIS APPROACH TO THE EVALUATION OF TEACHER BEHAVIOR

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by

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Student Teaching: A Case for Clinical Supervision

Due to the very nature of the student teaching experience, it is the author's opinion that a strong case can be made for the clinical perspective of supervision. First, the purposes of clinical supervision as discussed by Cogan (1973) seem to be appropriate. Significant emphasis is placed upon improvement of the student teacher's instruction. Traditionally, there is daily face to face relationships between the supervisor, cooperating teacher, and student teacher. Clinical supervision can be used to take advantage of this communication triad to give adequate feedback to individual student teachers about their teaching. And, admittedly, a clinical supervision approach can be seen as a way to help correct neglect on the part of some universities to provide a good system of in-class supervision.

Sergiovanni and Starratt (1979) concur with Cogan in that the focus of clinical supervision is upon improving instruction and increasing a teacher's personal development. It necessarily implies a commitment to professional, rather than occupational growth. Consequently the role of the university supervisor probably falls into what they would term an "intermediate" position. Because teacher development is dependent upon accurate feedback from the supervisor, co-op teacher, and self (student teacher), the joint analysis of the teaching act is essential. Within this perspective student teacher development only occurs through his/her self-analysis of their teaching. In order for this analysis to occur in a non-threatening, critically positive manner, the supervisor's status must be on an equal footing with the co-operating teacher and the student teacher. The co-workers of the supervisor must necessarily be viewed as concerned professionals. The collegiality of this triad makes possible the natural development of common purposes for the

field experience. This development will hopefully be growth promoting for all involved.

A Need for Formative Evaluation: It would seem somewhat apparent that given the case made for a clinical supervision perspective with regard to student teaching, the evaluative emphasis of such supervision should be formative in nature. Scriven (1967) indicates that the basic function of formative evaluation is to provide feedback about performance to the teacher and student throughout the learning experience. The author suggests four additional objectives of formative evaluation when applied to the student teaching situation. These are;

1. To identify and enhance desirable behaviors and skills during student teaching.
2. To determine weakness in or absence of desirable behaviors and skills during student teaching.
3. To prescribe instructional resources and training.
4. To forecast summative results.

The time of the evaluation occurs throughout the student teaching experience. The behavioral focus is upon observable, discrete teaching behaviors. The sources for gaining evaluative data are at the very least threefold; the cooperating teacher observing on nearly a daily basis, the self-analysis of the student teacher, and observations from the university supervisor. Occasionally the student teacher may also utilize input from fellow student teachers. They may also have access to indirect measures of teaching performance, i.e. student gain scores, student evaluations of teacher performance, peer review of instructional materials, etc. Generally, instrumentation is specifically designed for the evaluation.

Sergiovanni and Starratt (1979) indicate that in the formative approach to the evaluation of teaching, the supervisor communicates a respect for the teacher's competence in modifying instruction. It is the author's belief that even though student teachers are inexperienced, they have this professional competency to adapt and change their own teaching behavior. Perhaps the most critical factor in the clinical supervision process is the teacher's "readiness for change " state. One of the unique situations within student teaching is the very fact that the readiness state is very high for most student teachers. The clinical supervision format provides a psychological and technological support system for the student teacher to affect changes in their teaching.

Development of a Plan for Clinical Supervision and Evaluation of Student Teaching in Physical Education: An Application of the Methodological Aspects of Behavior Analysis.

It is a long held belief that field experiences, by their very nature, contribute to the positive development of future teachers. Teacher educators cling with naive optimism to the notion that putting trainees in contact with reality situations will, by definition, help them to become better teachers. A fair amount of the research focused upon the question; "What happens to the student teacher during his/her field experience?", tends to be negative in support of the above assumption. A summary of research findings discussed in the NSSE Yearbook Chapter, "On Becoming a Teacher", no longer tends to uphold the mythology of positive development of teaching skills through traditional field experiences. Fuller and Brown (1975) state;

> " Most studies find few benefits and many noxious effects particularly during student teaching. Student teachers become more impersonal, more negative, rigid and authoritarian; and change from a humanistic to a custodial approach, stressing bureaucratic order and control." (p.41)

The findings of studies conducted by Hutslar (1976) and Cramer (1977) tend to support those of Fuller and Brown. Comparisons of control groups of student teachers (supervised within typical "traditional models") and those of experimental groups (supervision emphasizing analytical teaching and behavior analysis) showed no significant differences in early teaching assessments between groups. Observations conducted towards the completion of the experience did indeed show a difference between the two groups. The experimentally supervised student teachers improved more than the controls over specified behaviors. This in and of itself was not surprising since that is what the experimental program was designed to accomplish. However, the significant findings of these studies were that the control student teachers not only failed to improve across teaching behaviors assessed as much as experimentals, they did not improve at all. In

fact, observations on the controls revealed patterns of performance that were inferior to those shown earlier in the experience. It was, partially at least, upon the basis of similar research findings that micro-teaching was developed at Stanford University. The development of such a program limited the need for interns to have field experiences and therefore get "contaminated" by that experience.

Such findings seem to be very pessimistic about the potentiality of positive developments in teaching skills among student teachers through field experience. Yet many supervisors know of individual cases when the field experience has had a great positive impact upon such development. Research conducted by Siedentop (1976) indicates that a number of important changes can be affected through the use of systematic assessment of teaching behavior during the student teaching experience. A number of Ohio State University studies indicate that student teachers can change their teaching behavior quickly, sometimes dramatically, when under a supervisory program which focuses upon behavioral change during the experience (Cramer,1977; Currens, 1977; Stewart, 1977; Dodds, 1976; and Hutslar, 1976). Such change seems to be contingent upon the extent to which the student teachers have specific objectives to achieve and regular, precise feedback about their progress in achieving those objectives.

A plan for a supervisory model adopted from Siedentop's research is developed on the next page (Figure 1). Such a plan is based upon certain methodological aspects of a behavioral approach to the improvement of teaching. Several elements of this approach are essential to the conceptualization of behavior modification processes and associated assessments of changes in teaching behavior. These are;

1. Clear description of the behavior category under consideration.

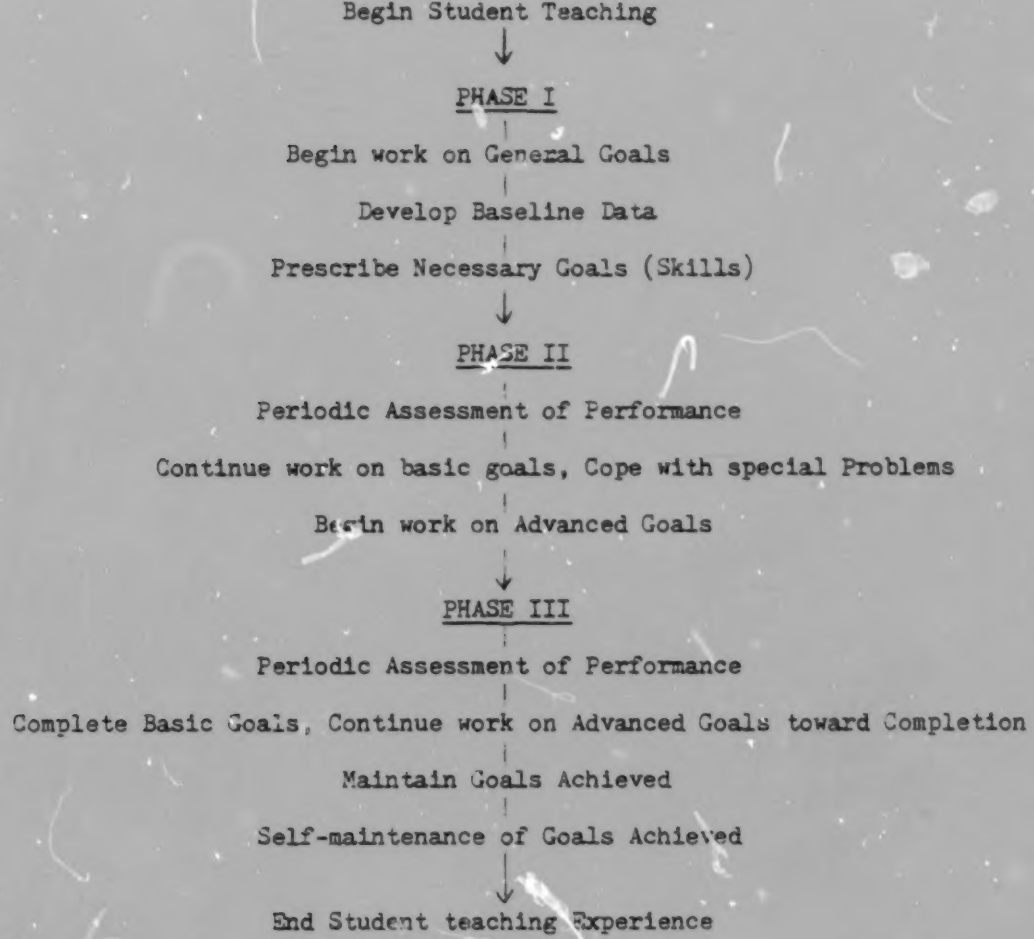
2. Attention paid to specific relationships between, a. the situation in which the behavior occurs, b. the emission of the behavior, and c. the consequences that accrue to the behavior.

3. Consistent monitoring of the frequency or duration of the behavior.

4. Analysis of the effects of the instructional variable.

Figure 1

Flowchart of a Plan for Improving Teaching Skills


Begin Student Teaching
PHASE I
Begin work on General Goals
Develop Baseline Data
Prescribe Necessary Goals (Skills)
PHASE II
Periodic Assessment of Performance
Continue work on basic goals, Cope with special Problems
Begin work on Advanced Goals
PHASE III
Periodic Assessment of Performance
Complete Basic Goals, Continue work on Advanced Goals toward Completion
Maintain Goals Achieved
Self-maintenance of Goals Achieved
End Student teaching Experience

A system derived from applied behavioral analysis relies heavily upon the use of frequency of occurence (or duration) as basic datum. It is also dependent upon the establishment of baseline logic for analyzing individual behavior across time as a function of various intervention strategies. This is an idiographic approach to the evaluation of individual student teachers' performances. It is a marked departure from the usual nomethetic approaches to educational evaluation which involves analysis of individual differences in performance using methods appropriate for groups. It forms the basis for the analytical teaching framework found in Ogden Lindsley's (1974) precision teaching.

The utilization of the behavioral approach requires that the student teaching behaviors identified to be focused upon, be mutually defined as clearly as possible by the supervisors, co-operating teachers and the student teachers. It should be then consistently monitored, creating a situation where the individuality is enhanced. Oien (1979) indicates that preconcieved teacher (in this case, supervisor) assumptions are less likely to impinge upon individual student growth, because the data generated from the monitoring process tends to control the teacher's educational decisions. Siedentop (1975) verifies that the usage of a behavioral model tends to minimize the effects of preconcieved notions about student teacher capability. He also feels that it may minimize the effects of biases and expectations that exist about the curriculum content and presentation which the student teacher may be forced to deal with upon entrance into the public schools for the field experience.

As the student teaching supervisor for the Division of Physical Education, College of Health, University of Utah, the author has attempted to apply this behavioral approach to the modification of student teacher behavior in a manner similar to the supervisory methods utilized by Hughly (1973). A description of the supervisory model used and corresponding observational formats follows.

Phase I: In order to establish a profile of teaching behaviors exhibited during a student teacher's initial instruction, the author utilized several descriptive behavioral categories established in the development of the Ohio State Teacher Behavior Rating Scale (1975). These behavioral categories were deemed sufficiently descriptive and inclusive of most specific teaching behaviors witnessed in the physical education setting. The behavioral descriptions are described below.

1. INPUT TEACHING ACTS: Includes all teacher behaviors that provide discriminative stimulus functions directly related to learning. i.e. questioning, elaboration, clarification, verbal guidance, demonstration, force-responding, and physical restriction.

2. MANAGERIAL: Teacher behaviors that provide a discriminative stimulus function indirectly related to learning. i.e. establishing order, directing the class to change activities, giving directions regarding equipment, record-keeping.

3. MONITORING: Watching class activity, subsets of the class or an individual. No verbal or non-verbal interaction occurring.

4. NO ACTIVITY: All teacher behaviors in which visual contact is broken and no verbal or non-verbal interaction occurs.i.e. looking out window, out of room, talking with another teacher, record keeping not directly related to immediate behavior of students.

5. SKILL ATTEMPT-POSITIVE IF: All verbal and non-verbal teacher reactions to an appropriate skill attempt by a student, positive in nature.

6. SKILL ATTEMPT-NEGATIVE IF: All negative verbal and non-verbal teacher reactions to appropriate skill attempt by student, including corrective feedback.

7. POSITIVE REACTION TO ON- TASK BEHAVIOR: All positive verbal and non-verbal reactions to on-task student behaviors other than skill attempts.

8. NEGATIVE REACTION TO OFF-TASK BEHAVIOR: All negative verbal and non-verbal teacher reactions to off-task student behavior.

The observational format used during these intitial observations on the part of the supervisor and co-operating teacher was similar to Siedentop's "Placheck" format (1976). It is shown in Figure 2.

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Figure 2

Observational Format

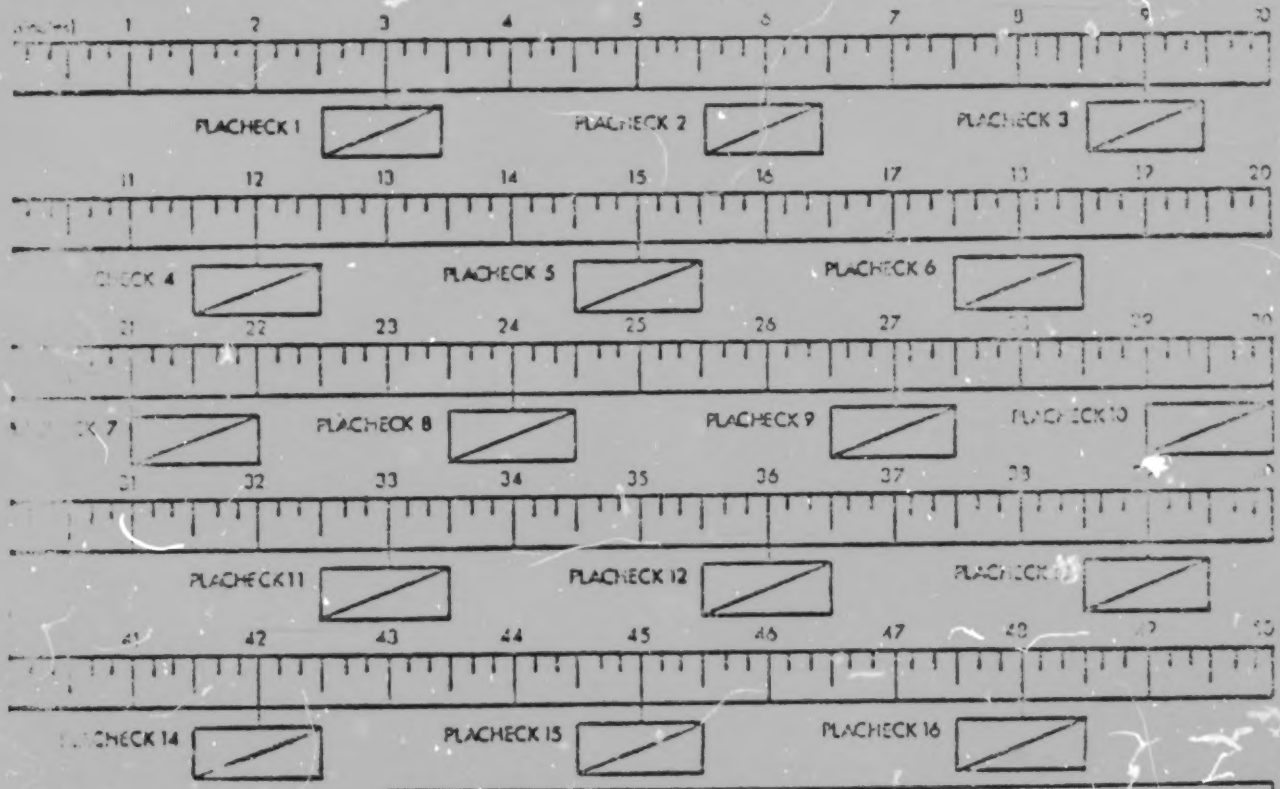
(Please note Appendix for explanation in the use of this Instrument)

Observer_____ Date_____ Student Teacher_____

School_____ Grade(s)_____ # of Students_____

Activity_____ Time Started_____ Time Finished_____ Total Ob. Time_____

(TIME ANALYSIS CODES: I- INSTRUCTION; A- ACTIVITY; M-MANAGEMENT)



TIME ANALYSIS

[illegible] MANAGEMENT TIME	
[illegible] MANAGEMENT TIME	
[illegible] INSTRUCTIONAL TIME	
[illegible] INSTRUCTIONAL TIME	
TOTAL ACTIVITY TIME	
[illegible] ACTIVITY TIME	

SKILL FEEDBACK STATEMENT					
POSITIVE		[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL					
RATE P/M					

BEHAVIORAL INTERACTIONS			
POSITIVE		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]

Utilizing this established behavior scale, and the "Placheck" format in a minimum of three supervisory observations, a profile of teaching behaviors elicited by the student teacher was established. From this profile, notable problems of performance were specified. These areas of concern were discussed jointly by the supervisor, co-operating teacher, and student teacher. From this discussion, target goals were established.

In order to explain the subsequent phases of the supervisory model, a specific case study will be offerred. Backround information includes; Student Teacher: Ron., Placement: Large City High School , Teaching Assignment: Co-educational Physical Education Setting, 9th and 10th Grades.,Units Taught: Weight-training and Soccer-Speedball-Speed-away.

Phase II: Upon initial observations of Ron teaching during the first week of student teaching; the supervisor and cooperating teacher noted a disproportionate amount of teaching behavior exhibited by Ron under category #2; Managerial Functions, during the teaching of his weight training classes. (Note Figure 3). In addition, the number of negative reactions to off-task student behaviors on the part of Ron, indicated that he was having difficulty in dealing with inappropriate and disruptive behavior on the part of the students. It was felt that the frequency of managerial performance should ideally be reduced as much as possible. The intent being to have Ron organize the instructional environment in such a way that students would be responsible for self-management of their activities; thereby reducing the necessity for him to spend his time in managerial modes, when it should be spent in instructional modes, acting as a skill feedback agent, for greater motor learning to occur. It was also felt that the off-task behavior by students would sharply drop in number. Consequently, on-task behaviors durations would increase for all stuients. Greater student gains would result.

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Figure 3

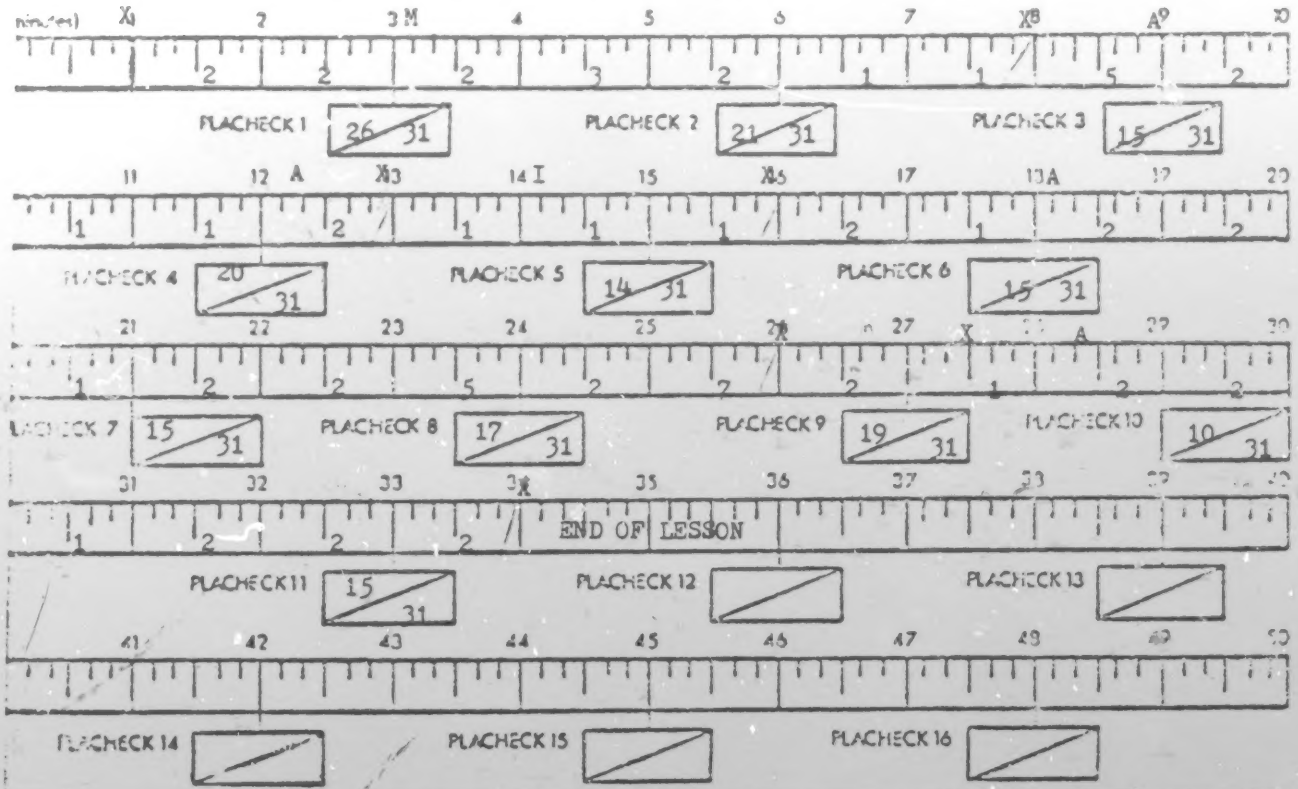
Phase I, Initial Observation #2

Observer: S. Gangstead Date: 5-7-81 Student Teacher Ron V.

School: Alta High School Grades 10th # of Students 31

Activity Weight training Time started 1:06 Time Finished 1:40 Total 34min.

(TIME ANALYSIS CODES: I- INSTRUCTION; A- ACTIVITY; M-MANAGEMENT)



TIME ANALYSIS

TOTAL MANAGEMENT TIME	12/34
% MANAGEMENT TIME	50%
TOTAL INSTRUCTIONAL TIME	15/34
% INSTRUCTIONAL TIME	44%
TOTAL ACTIVITY TIME	19/34
% ACTIVITY TIME	55%

SKILL FEEDBACK STATEMENT					
POSITIVE		CORRECTIVE		NEUTRAL	
GENERAL	SPECIFIC	GENERAL	SPECIFIC		
11	0	11	11111-11	0	11111 1
TOTAL 2	0	2	7	0	6
RATE P/M					

BEHAVIORAL INTERACTIONS			
POSITIVE		CORRECTIVE	
GENERAL		GENERAL	SPECIFIC
11	1	11111 11111 111	11111 11111 1111

Mean # of students on-task throughout entire lesson = 16.8/31 = 54.2%

The co-operating teacher then used the observational format to gain baseline data on Ron's managerial behaviors, plachecks, and teacher reactions to students' on and off-task behavior. Feedback about these observations was given to Ron, with no specific intervention strategies discussed. (Note Figures 4-6, Phase I). A subsequent observation indicated that the frequency and/or duration of specified behaviors were not reduced (or incresed as appropriate) significantly.

Following these observations, the supervisor, co-operating teacher, and Ron discussed various ways in which he might go about putting management responsibilities upon the students, rather than he hinself bearing the entire load. An individualized curricular focus for each student was suggested. Each student would work on their own prescribed wieght training program, and would be responsible for making daily records of their performance. Periodic assessments of individual student performance would be done by Ron. This new curricular focus for the wteght training unit was formulated and initiated by Ron in his classes. The supervisor and co-operating then noted changes in target behaviors in continued observations.

The duration level of Ron's managerial behavior quickly reached a previously agreed upon, acceptable level. Although, the proportion of students' off-task in relation to those on-task during class time was reduced greatly, it was decided that this should be the next area in which Ron should focus his instructional energies. (Refer to Figures 4-6, Phase II)

Phase III: Upon review of the last several teaching observations, Ron decided to approach the problem of student involvement in two ways. His first strategy was to conscientiously give an increased amount of praise and encouragement to those who were working hard on their programs. This was done both individually and at times, noting the student's improvement to the entire class.

Secondly, Ron attempted to give positive reinforcement to students for behavior which was not necessarily related to their program performances, but which was related to the positive learning atmosphere of the class, i.e. good care of equipment, collecting recording materials, spotting other while lifting, taking turns on the universal gymns, etc.

At this point in time, Ron decided that he would like to have his classes video-taped. It was his wish that he also be able to observe and record his own interactions with his students. The proportion of students involved in on-task behavior increased significantly after Ron employed his intervention strategies. (Note Figures 5 and 6, Phase III). Ron also noted a substantial drop in the number of negative reactions he was making towards student behavior.

It is important to note that Ron expressed very positive feelings about his teaching midway through his teaching experience, an attitude which was not present during the first few weeks of his experience. It was exciting, as a supervisor, to watch Ron become critical about his teaching, and to subsequently become the active agent in producing changes within his teaching style and the methodologies he is able to effectively utilize. It was his expressed feeling that the consistent assessment of targeted teaching behaviors played an integral part in improving his teaching skills.

The willingness of Ron to become involved in self-confrontation and discrepancy analysis, through the use of video tape should be noted. For the author, this indicated that the triad was able to create a supervisory climate that was comfortable for him. The self-disclosure of his own teaching weaknesses was non-threatening to him.

Figure 4

Total Managerial Durations per Class Period

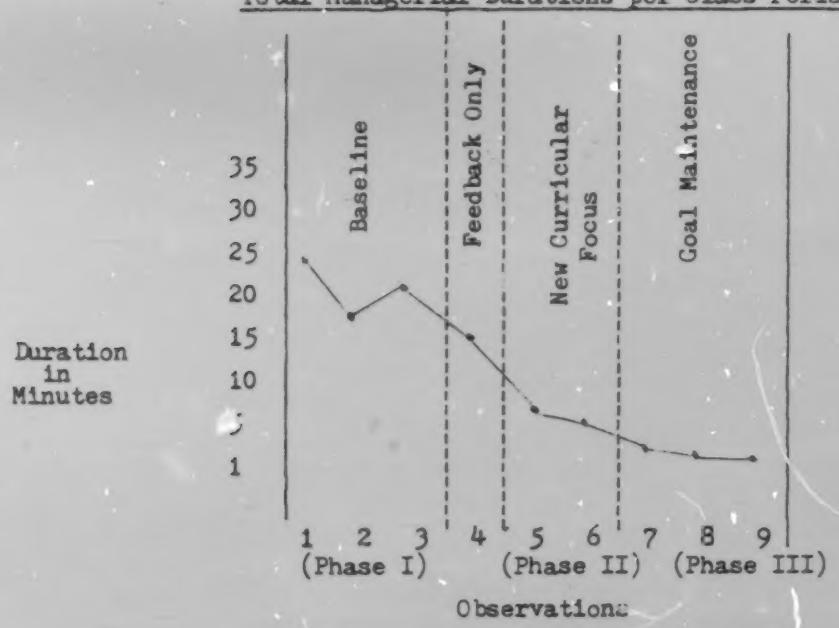


Figure 5

Total Behavioral Interactions per Class Observation

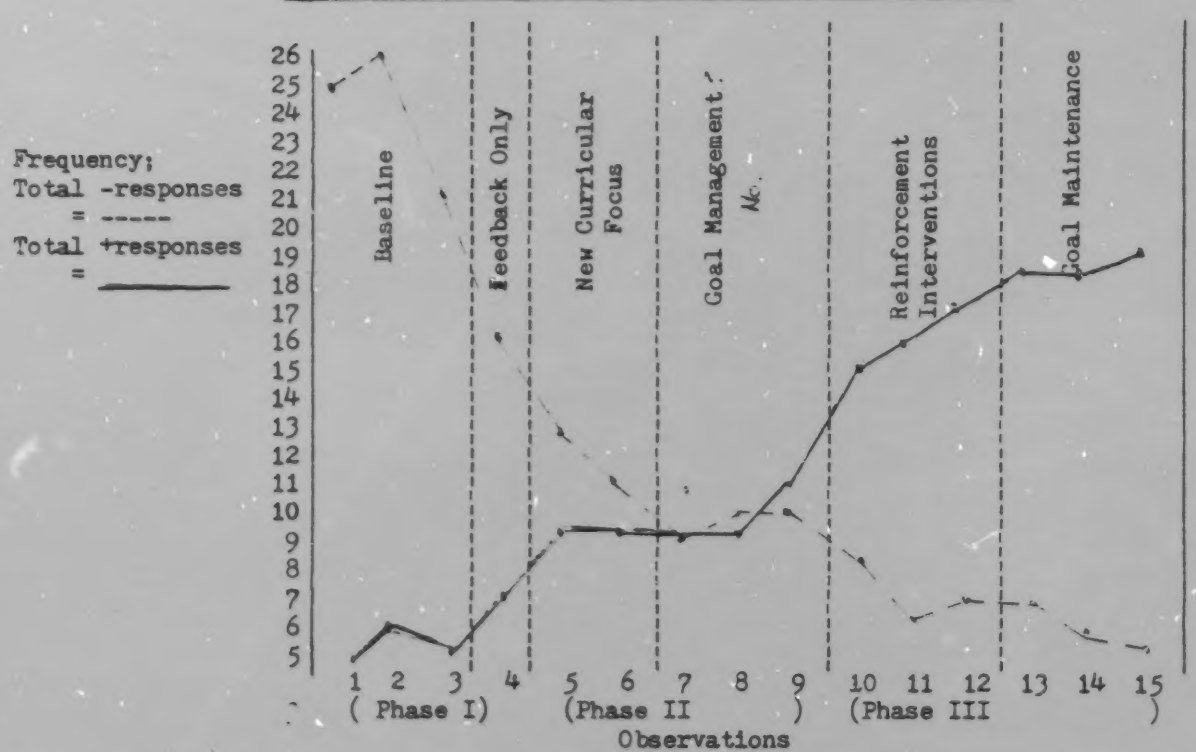
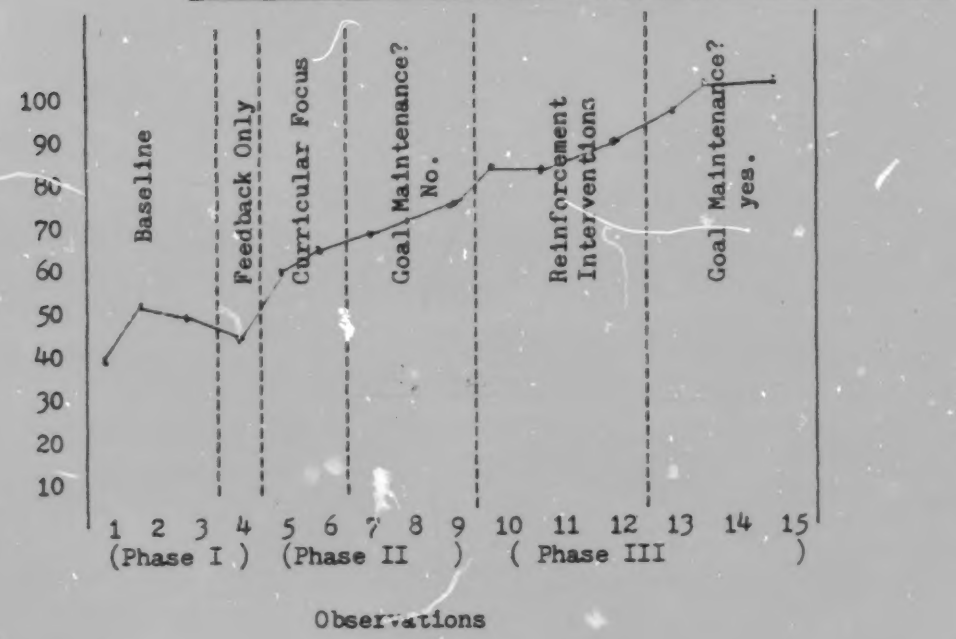


Figure 6

Mean proportion of students on-task throughout lesson



Thoughts and Reactions to the Plan: The author has found, throughout her student teaching supervisory experiences, that student teachers can accomodate only a limited number of major changes during their experience in the field. Research by Cramer (1977) supports this conclusion by noting that attempting too many changes minimizes the effectiveness of the changes a supervisor does effect.

The major difficulty a supervisor will encounter utilizing the model prescribed, will be in the process of coming to agreement as to what constitutes a specific behavioral definition. The emphasis is indeed upon the words, "coming to an agreement", connoting a contractual formation of the parameters in which specific teaching behaviors will be defined, and subsequently observed. These definitions created by the student teacher, cooperating teacher and supervisor are functional in nature. They are not imposed upon the student teacher from an outside, impersonal , authoritarian force.

Yet within the process of selecting and defining the teacher behavior to be analyzed, comes one of the major benefits in using this behavioral approach. It forces each member of the triad to seriously and specifically consider what the field experience is intended to accomplish. Forthcoming goals established with the student teacher are specific to the needs of the individual, and relevent to the particular teaching situation he/she is rather arbitrarily placed within.

Perhaps the greatest value in attempting to recast definitions of teaching into behavioral terms, is that each individual involved in the process is forced to re-examin their beliefs about what "good teaching" is. Student teachers are not put into the anxious position of having to

"guess" at where their cooperating teachers and supervisors are "at" in relation to their own beliefs about teaching.

Three basic assumptionsof the behavioral approach have been apparent throughout the supervisory model explained in this paper. The grounding of these assumptions are now apparent to the author after application of the model in real field situations. These are;

1. In order to measure change in teaching behavior, to ensure that it has indeed occurred, to testify to its efficacy, one must assess the behavior on some systematic basis.

2. The frequency of assessment must be high because the level of "resonse produced feedback" is quite low in teaching. It is hard to decipher, and rarely specific.

3. Teachers can learn to be better interpreters of their own teaching behavior, as they teach. Siedentop (1977) research supports this statement. He states, "...skill comes from a large number of repetitions in which they (teachers) have a chance to match their own 'guesstimates' with some objective competitor" p.3

Because of the observation and evaluative process's empirical design and its emphasis upon precision of measurement, it would appear to be highly technical and somewhat "scientistic" in its approach. However, the author does not feel that it fits neatly into the "technical-rational" perspective of supervision. The specific teaching behaviors looked at are not handed down from a heirarchical beaurocratic structure. But are instead formed within a triad of three professionals working together to formulate workable definitions of teaching behavior and achievable teaching goals. The assessment process is based upon individual student needs. Although the model is methodical and very systematized, flexibility is also possible. From the

standpoint of "individuality", the process is very "humanistic".

Perhaps in at least one aspect, the process may lean close to the "human resource" perspective of supervision. The student teacher is viewed as a knowledgeable, educated professional, albeit somewhat less experienced than those he/she is working with in the field. It is the student teacher who acts upon the observations of his co-workers, and who attempts changes, hopefully for self-satisfying improvement in his/her teaching.

"Meta" Evaluation of the Evaluation Plan: Using five basic criteria established by Kunkel and Tucker (1977), the author will offer short comments on the teaching evaluation model used. These five criteria are qualities that good evaluation plans should have.

1. Holism - An accurate evaluation should avoid distortion of the total reality being evaluated. The authors discuss the fact that undue distortion on quantification of a very few variables can occur. It is this authors feelings that as long as an evaluator, supervisor does not make very rigid judgments based upon quantitative data, it can be very useful, and reinforcing to the student teacher. If using the behavioral focus, the emphasis should be on "trends "in improvement.

2. Helpfulness towards Improvement- This seems to be the major benefit in this model. It is not an attempt to rank, or categorize student teacchers, which is at best a irrational task. Essentially the criteria of effectiveness is the student teachers own behaviors and how he/she values that behavior.

3. Acceptance of Hard and Soft data. Although the system seems to depend on hard empirical data, room must be allowed for rather naturalistic, informal observations also. The intuitive perceptions of master teachers are important to the professional development of the student teacher. This should be done during informal meetings with the student teacher.

4. Evaluation Vulnerability- This quality means that during the process of evaluation, there needs to be ample opportunity for dialogue between the evaluator and the evaluated. Perceptions need to be discussed and conclusions negptiated. Within this model, this quality is present.

5. Vision of the Future- The evaluation is seen as a process of self-renewal. This is the entire thrust of formative evaluation.

Conclusions

The student teaching experience can be growth promoting for young teachers entering the field. The assessment of teaching need not be a negative, destructive experience. The judgmental overtones surrounding evaluation need to be acknowledged by all parties and dealt with in such a way that what is left for the student teacher is a knowledge of progress towards teaching goals and the satisfaction of improvement.

It should be noted that the behavior analysis approach discussed is not meant to totally replace the somewhat more traditional supervisory techniques used in student teaching. Qualitative data, hints from experienced teachers, and counseling all have their place. It is the opinion of the author that these efforts would be more meaningful when built upon a piramid of empirical evidence.

What has not been discussed within this paper has been the reality of the summative decisions which must be made by the supervisor regarding the student teacher and his/her experience. Such summative evaluations must be made for several reasons. These are;

1. to certify the student teacher's proficiency in the use of teaching strategies, procedures, and techniques.
2. to predict the success of the student teacher in future teaching assignments.

3. to support continuance or termination decisions made by the university supervisor.

Given this reality, the author has included some very general competencies which are considered necessary areas in which the student teachers are expected to show minimum proficiency. See Appendix. Given the need to satisfy the rather beaurocratically imposed requirements of summative evaluation, the supervisor can use such competency lists to give their own "pass/fail" judgements. Acknowledging that such types of processes are rather ritualistic in nature.

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Appendix

Discussion of the Observational Format

The horizontal time lines are used in this instrument to record changes in class climate along time defined as instructional time, activity time or managerial time. The time line allows for 50 minutes of recording. Differentiation among the various changes in class climate are accomplished by drawing a line through the box at the time the change occurs.

The small boxes that appear below the time lines are utilized in making periodic checks about what the class is doing as a whole. This group time sampling is termed "placheck" recording (Planned Activity Check). Plachecks are made a 3, 8, 14, 20, 26, 32, 38, and 44 minute intervals. Two can be made. One check counts the number of students behaving appropriately according to previously worked out definitions. The second placheck counts the number of students involved in active learning- physical involvement with a learning activity. Each placheck takes approximately ten seconds to complete. The time devoted to this observational format is small, yet a fair representative sample of student behavior is gained because of the periodic spacing of these observations throughout the class period. The observations give data relevent to goals dealing with maintaining adequate levels of appropriate behavior. It also gives the supervisor a measure of the student teacher's effectiveness in involving the students directly in learning experiences.

The boxes at the bottom of the sheet are to record teacher interactions in the two basic categories of skill feedback statements and behavioral interactions. Darkened areas on the time line indicate times when the observer records instances of teacher behavior categories targeted. This is also spaced to gain a representative sample of teacher behavior throughout the class period.

The instrument looks at only a few relevent (behaviorally defined) target behaviors the student teacher exhibits during instruction and a few important

student behaviors. Yet the total picture developed on this one observation sheet allows the student teacher and the supervisor to understand a great deal about how the class was taught.

Hughly (1973) reports that undergraduates have learned to use the Planned Activity Check with a minimum of 85% inter-rater reliability, in repeated measures studies in a period of a few observational hours.